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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,994	11/08/2006	Lloyd A Nelson	ARZ-024630-WO	9073
67844 7590 03/18/2010 ARIZONA CHEMICAL COMPANY c/o Bo Segers P.O. Box 550850 Jacksonville, FL 32255				
EXAMINER				
VASISTH, VISHAL V				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
03/18/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/572,994

**Applicant(s)**

NELSON ET AL.

**Examiner**

VISHAL VASISTH

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/22)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. Claims 4-14, 18-22 and 24 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 4-14, 18-22 and 24 state "any of claims 1-3," which is not a proper multiple dependent form. See MPEP 608.01(n).
2. Claims 4-14, 18-22 and 24 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n).

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1-30 there are no reaction ratios between the reactants, no reaction conditions (temperature, pressure) set forth and the desired product or products is also not set forth in the claims. The examiner is of the position that it is unclear what possible ester reaction products the claims encompass, and it is not clear what possible ester products are precluded to others.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1-2, 4-16 and 18-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Denis et al., US Patent No. 4,036,771 (hereinafter referred to as Denis).

Denis discloses a composition comprising a mixture of complex ester oils (Col. 2/L. 55-57) wherein each ester oil is the result of esterification of a trimer and dimer acid with a dihydroxyl compound and a monohydroxyl compound (as recited in claims 1-2 and 16) (Col. 1-2/L. 51-54). Denis discloses that the dimer and trimer acids results from the dimerization or trimerization of unsaturated fatty acids wherein the dimerization or trimerizaion can be followed by a hydrogenation operation (as recited in claims 4 and 18) (Col. 3/L. 12-18). Denis discloses that the dihydroxyl compounds include ethylene glycol and neopentyl glycol (as recited in claims 7-9 and 23) (Col. 4/L. 12-24) and the monohydric alcohols include isotridecanol and 2-ethylhexanol (as recited in claims 5-6, 10-11, 19-21 and 23) (Col. 4/L. 25-35).

Denis discloses both a first and second complex ester wherein the first ester has all the reaction components of the instant claims as does the second

ester. Therefore, it is the position of the examiner that the first ester would inherently have a higher viscosity than the second ester as recited in instant claims 12 and 22-23 and that the combination of complex esters would have a viscosity measured at 100°C of about 40 cSt as recited in instant claims 13-16.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 3 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denis.

Denis discloses complex ester compositions comprising dimer and trimer acids reacted with a dihydroxyl compound and a monohydroxyl compound as discussed above. Denis does not explicitly disclose the weight ratio of dimer to trimer acid in the complex ester reaction.

Denis does, however, disclose that the compositions of the invention can result from esterification of mixtures in varying proportions of dimeric + trimeric acids and monocarboxylic acids by a polyalkylene glycol, the proportions of the reagents then being such that to 1 mole of acid (dimeric + trimeric) there substantially corresponds 2 moles of polyalkylene glycol and the number of moles of monocarboxylic acid necessary to esterify the remaining hydroxyl functions. It would have been obvious to one of ordinary skill in the art at the time of the invention that the weight ratio of trimer to dimer acid would fall within the range of 80:20 to 20:80 wt% based on the disclosure of Denis.

***Claim Rejections - 35 USC § 103***

10. Claims 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heimann et al., US Patent No. 6,010,984 (hereinafter referred to as Heimann).

Heimann discloses a lubricant composition for optical fiber cables (Col. 9/L. 31) comprising a silica/silicate mixture (see Abstract), a base oil and a thickener.

Heimann discloses base oil that include synthetic esters (Col. 3/L. 8-17), but Heimann does not explicitly disclose a mixture of complex esters that include the reaction components of a trimer acid, a polyhydric alcohol and a monohydric alcohol.

Denis discloses a composition comprising a mixture of complex ester oils (Col. 2/L. 55-57) wherein each ester oil is the result of esterification of a trimer

and dimer acid with a dihydroxyl compound and a monohydroxyl compound (Col. 1-2/L. 51-54). Denis discloses that the dihydroxyl compounds include ethylene glycol and neopentyl glycol (Col. 4/L. 12-24) and the monohydric alcohols include isotridecanol and 2-ethylhexanol (Col. 4/L. 25-35).

Denis discloses both a first and second complex ester wherein the first ester has all the reaction components of the instant claims as does the second ester. Therefore, it is the position of the examiner that the first ester would inherently have a higher viscosity than the second ester and that the combination of complex esters would have a viscosity measured at 100°C of about 40 cSt.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the complex ester composition of Denis in the composition of Heimann in order to enhance the anti-scutting properties and reduce the coefficient of friction of the composition (Col. 9/L. 29-35 of Denis).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VISHAL VASISTH whose telephone number is (571)270-3716. The examiner can normally be reached on M-R 8:30a-5:30p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VVV

/Glenn A Caldarola/  
Supervisory Patent Examiner, Art  
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